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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/673,305  | 09/29/2003  | Timothy E. Dorr      | 130-018             | 1514             |
| 34845   | 7590        | .09/27/2005          | EXAMINER            |                  |
| STEUBING AND MCGUINESS & MANARAS LLP<br>125 NAGOG PARK<br>ACTON, MA 01720 |             |                      | PHAN, RAYMOND NGAN  |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2111                |                  |

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                          |                     |  |
|------------------------------|--------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>   | <b>Applicant(s)</b> |  |
|                              | 10/673,305               | DORR ET AL.         |  |
|                              | Examiner<br>Raymond Phan | Art Unit<br>2111    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5, 12-16 and 23-27 is/are rejected.
- 7) Claim(s) 6-11, 17-22 and 28-33 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**Part III DETAILED ACTION**

***Notice to Applicant(s)***

1. This application has been examined. Claims 1-23 are pending.
2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 112***

4. Claims 6-10, 17-21, 28-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 6, 17, 28, using the phrase, "...response to the polls...", lacks proper antecedent basis and causes the claim to be vague and indefinite.

The remaining claims, not specifically mentioned, are rejected for incorporating the defects from the parent claim by dependency.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 12-15, 23-26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Perreault et al. (US No. 5,793,307).

In regard to claims 1, 12, 23, Perreault et al. disclose the apparatus comprising a master device for polling a plurality of slave devices and maintain a fast polling list 38 and a slow polling list 44 (see figure 2, col. 6, lines 30-67); wherein each slave device is associated with either the fast polling list or the slow polling list, and wherein the fast polling list is polled by the master device more frequently than the slow polling list (see col. 10, lines 4-39); and wherein the slave device is associated with the fast polling list if the slave device respond to a poll from the master device within a time period (see col. 9, lines 47-54), and wherein the slave device is associated with the slow polling list if the slave device does not respond to a poll from the master device within a time period (see col. 9, lines 55-67).

In regard to claims 2, 13, 24, Perreault et al. disclose wherein the slave device on the slow polling list is unassociated with the slow polling list and associated with the fast polling list if the slave device responds to a poll from the master device within the time period (see col. 9, line 55 through col. 10, line 3).

In regard to claims 3, 14, 25, Perreault et al. disclose wherein the slave device on the slow polling list is polled by the master device after all slave devices on the fast polling list have been polled (see col. 9, line 55 through col. 10, line 3).

In regard to claims 4, 15, 26, Perreault et al. disclose wherein the master device and slave devices are coupled to a serial bus, and wherein the master device polls the slaves devices by sending commands on the serial bus (see figure 2, lines 5, lines 23-60).

7. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 16, 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato et al. (US No. 6,070,205) in view of Cranston et al. (US No. 6,253,269).

In regard to claims 5, 16, 27, Kato et al. disclose the plurality of slave devices (see figure 4, col. 5, line 66 through col. 6, line 14); a plurality of control devices that are capable of being master devices (see figure 4, col. 6, lines 3-7); a plurality of serial buses to which the control devices and slave devices are coupled (see figure 4, col. 5, line 66 through col. 6, line 3); wherein the plurality of control devices arbitrate to determine which of the plurality of control devices shall be the master device for controlling the plurality of serial buses (see col. 14, lines 26-40). But Kato et al. do not specifically disclose wherein the master device periodically switches between the plurality of serial buses to communicate with the slave devices. However Cranston et al. disclose the bus arbiter system and method for managing communication buses comprising the plurality of serial buses wherein the master device periodically switches between the plurality of serial buses to communicate with the slave devices (see col. 5, lines 21-66). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Cranston et al. within the system of Kato et al. because it would allow the application cards to dynamically select or arbitrate between different communication buses.

*Allowable Subject Matter*

9. Claims 11, 22, 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 6-10, 17-21, 28-32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 6, 11, 17, 22, 28, 33 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach after the master device has switched from the first of the plurality of serial buses to the second of the plurality of serial buses, if a slave device responds to a poll on the second of the plurality of serial buses and the slave device did not respond to a poll on the first plurality of serial buses as evidenced by the tracked responses, the master device ceases switching to the first of the plurality of serial buses (claims 6, 17, 28); if no activity is detected on the plurality of serial buses, the control station waits for a time period associated with the timeout parameter and if upon expiry of the time period, there is still no activity detected on the plurality of serial buses, the control station becomes the master station (claims 11, 22, 33).

*Conclusion*

12. Claims 1-5, 12-16, 23-27 are rejected. Claims 6-11, 17-22, 28-33 are objected.

13. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

**Ramakrishman et al. (US No. 6,114,968)** disclose a hybrid contention/polling access method.

**Bastiani et al. (US No. 6,675,243)** disclose a method and apparatus for implementing a device side advanced serial protocol.

**Carney et al. (US No. 6,615,161)** disclose a method and apparatus for adjusting an interval of polling a peripheral device in response to changes in the status and/or reliability of receiving traps.

**Ivan et al. (US No. 6,832,271)** disclose a system and methods for monitoring and displaying I/O data for plurality of I/O devices.

**Smith (US No. 6,629,178)** discloses a system and method for controlling bus access for bus agents having varying priorities.

**Kumar (US No. 6,640,268)** discloses a dynamic polling mechanism for wireless devices.

**Dirstine et al. (US Pub No. 2004/0215847)** disclose an automatic I/O adapter response performance optimization using polling.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (571) 272-3639 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571) 272-2100.



PAUL R. MYERS  
PRIMARY EXAMINER

*Raymond Phan*  
*September 18, 2005*